UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,931	10/18/2004	Kenji Narumi	10873.1565USWO	2525

7590   08/28/2007

HAMRE SCHUMANN MUELLER & LARSON PC
P O BOX 2902-0902
MINNEAPOLIS, MN 55402

EXAMINER
PHAM, VAN T

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
08/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/511,931	NARUMI ET AL.
	Examiner	Art Unit	
	VAN T. PHAM	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08-07- 2007</u>.

2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,5,6,9,15-20,23-27,31,32,35,41-46 and 49-52* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,5,6,9,15-20,23-27,31,32,35,41-46 and 49-52* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114.   Applicant's submission filed on

08/07/2007 has been entered.

Response to Arguments

2.   Applicant's arguments filed 02/20/2007 have been fully considered but they are

not persuasive.

Applicant's asserted, "Masui '079 discloses correcting an edge position of a

recording mark but not disclose nor suggest that the "'correction accuracy of the

recording pulse position is determined to be any of a plurality of degrees of accuracies

depending on the information recording conditions or the information recording

characteristics.", which is incorrect. Masui discloses see

[0037] According to a record data pattern, this example controls a mark

configuratiuon by **amending** the pulse width of a record pulse, output timing, and

the die length to which the power at the time of a record pulse standup and this

record power are changed further with high precision to the edge location of a

record mark, and a pan.

[0040] Each die length L0, L1, and L2 which such modulation data were

inputted into the record data pattern discernment means 1, and was mentioned

above it is computed. Each computted die length L0, L1 and L2 data are inputted into the correction value setting means 2, and the pulse width of the record pulse according to the record data pattern based on these data and the correction value is output timing are set up. For example, the output timing of the front edge of a record pulse and the output timing of a back edge are set up, and pulse width is determined from such two timing. **Based on such correction value, with the record pulse amendment means 3, a record pulse is amended, the amended record pulse information is sent out to a laser drie circuit (not shown), semiconductoe laser (not shown) is blinked, and a record mark is formed in an optical recording medium .**

Masui discloses a correction accuracy of the recording pulse position is determined to be any of a plurality of degrees of accuracies depending on the information recording condition or the information recording characteristics (see response above and Figs. 1-3).

However, Applicant pointed out Masui Paragraph [0042] mentions that data of the lengths L0, L1 and L2 computed by the recording data pattern identification means are used as the address input to the ROM 8, and that the optimum values of the correction value of the recording pulse according to the data of the lengths L0, L1 and L2 are stored in this ROM 8 in advance, and that the output of this ROM 8 is used as a correction data of the recording pulse era write target- In other words, in Masui '079, the optimum value of the correction value is already stored in ROM; and this optimum value is a constant value that is used to correct the recording pulse, which is correct; but incorrect about "Masui

'079 does not evaluate a plurality of degrees of accuracies". Even though, Masui

discloses "the optimum value of the correction value of the record pulse according

to ddata is made to memorize beforehand, and it constitutes so that the output of

this ROM8 may be used as amendment data of the record pulse for writing" (see

[0042]), but the recording pulse position is determined to be any of a plurality of

degrees of accuracies as discloses in [0040].

Noted : the instant application mentions that

"a table registration memory 3 that registers the information in the correction table into

each element. It should be noted that information in the correction table can be registered

in the table registration memory 3 by read-out from the optical disk 1, or it can be

recorded in the table registration memory 3 in advance".

And see

[0078] In this case, the structure of the correction table in the table
registration memory 3 is as shown in Table 1 and Table 2.

1TABLE 1 Forward edge correction amount Recording code length 6T and 3T 4T
5T greater Pre-code 3T .DELTA. (3, 3) F .DELTA. (3, 4) F .DELTA. (3, 5) F
.DELTA. (3, 6) F length 4T .DELTA. (4, 3) F .DELTA. (4, 4) F .DELTA. (4, 5) F
.DELTA. (4, 6) F 5T .DELTA. (5, 3) F .DELTA. (5, 4) F .DELTA. (5, 5) F
.DELTA. (5, 6) F 6T .DELTA. (6, 3) F .DELTA. (6, 4) F .DELTA. (6, 5) F
.DELTA. (6, 6) F and greater

[0079]

2TABLE 2 Forward edge correction amount Recording code length 6T and 3T 4T
5T greater Post-code 3T .DELTA. (3, 3) L .DELTA. (4, 3) L .DELTA. (5, 3) L
.DELTA. (6, 3) L length 4T .DELTA. (3, 4) L .DELTA. (4, 4) L .DELTA. (5, 4) L
.DELTA. (6, 4) L 5T .DELTA. (3, 5) L .DELTA. (4, 5) L .DELTA. (5, 5) L
.DELTA. (6, 5) L 6T .DELTA. (3, 6) L .DELTA. (4, 6) L .DELTA. (5, 6) L
.DELTA. (6, 6) L and greater

[0080] These tables represent the correction amount of the front end edge
position and the back end edge position when the shortest code length is 3T,

and the longest code length is 11T.

[0081] Correction tables that use the same correction values for 6T and above
are recorded as information in the control track region of the optical disk
used in the present embodiment. Consequently, from the combination of the code
lengths, there are 32 elements in the correction tables.

[0087] The system signal circuit 2 registers the edge position that is being
set in the table registration memory 3 in the system control circuit 2 as edge
position information, and concludes the test recording with respect to this
combination table element. Moreover, in a table element determination step
(S406), the system control circuit 2 determines whether S405 has been repeated
or not for all the elements of the combination table, and completes the setting
and registration of the edge position of all 32 table elements shown in Table 1
and Table 2, after which it completes the test recording and starts recording
the actual information signal.

[0145]....the table setting signal 21 that comes from the table registration memory 3 is
compared to a combination of the pre-code length and the post-code length, or a
combination of the recording code length and the post-code length, so as to set the
correction amount of the recording pulse edge....

Claims dose not recite that the optimum values of the correction value of the recording

pulse according to the data of the lengths L0, L1 and L2 cannot stored in the ROM in

advance. However, the instance application also has the correction table can be registered

in the table registration memory 3 by read-out from the optical disk 1, or it can be

recorded in the table registration memory 3 in advance".

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1, 5, 6, 9, 23, 25-27, 31-32, 35, 49 and 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Masui Narihiro (JP 5234079).

Regarding claim 1, Masui Narihiro, see Figs. 1-3 and abstract, discloses an optical information recording method for recording information onto an optical information recording medium, the method comprising:

an identification step of identifying an information recording condition or information recording characteristics of the optical information recording medium (see abstract and Figs. 1-3, and [0037]-[0042]); and

a recording pulse correction step of correcting a recording pulse position, in order to form a recording mark in a predetermined position (see Figs. 1-3);

wherein in the recording pulse correction step, correction accuracy of the recording pulse position is determined to be any of a plurality of degrees of accuracies depending on the information recording conditions or the information recording characteristics that were identified in the identification step (see Figs. 1-3 and [0037]-[[0043], see response above).

Regarding claim 5, see Figs. 1-3, 6, discloses the optical information recording method according to claim 1, wherein an optical information recording medium that contains a control track region is used as the optical information recording medium (see Figs. 1) , the identification step further comprising: an identifier detection step of reproducing information from the control track region (see Figs. 1, 3, 6), and detecting an identifier that represents the information recording conditions or information recording characteristics of the optical information recording medium (see Fig. 2), from the information that is reproduced; wherein in the recording pulse correction step (see Figs.

2, element 2), the correction accuracy of the recording pulse position is differentiated according to the information recording conditions or information recording characteristics that are represented by the identifier detected in the identifier detection step (see Fig. 2).

Regarding claim 6, see Figs. 1-3, 6, discloses the optical information recording method according to claim 5, wherein the identifier that is detected in the identifier detection step is an identifier that represents a recording density of the optical information recording medium (see Fig. 1-3).

Regarding claim 9, see Figs. 1-3, 6, discloses the optical information recording method according to claim 5, wherein the identifier that is detected in the identifier detection step is an identifier that represents a linear recording velocity of the optical information recording medium.

Regarding claim 23, see Figs. 1, 3, discloses the optical information recording method according to claim 1, wherein a process of recording onto the optical information recording medium is a mark edge recording process.

Regarding claim 25, see Figs. 1-3, 6, discloses the optical information recording method according to claim 1, wherein in the recording pulse correction step, the recording pulse position is corrected by changing a forward edge position of a front end pulse and a rear edge position of a back end pulse (see [0019]-[0033]).

Regarding claim 26, see Figs. 1-3, 6, discloses the optical information recording method according to claim 1, wherein in the recording pulse correction step, the recording pulse position is corrected by changing the actual position of a front end pulse and a back end pulse (see rejection above of claim 25).

Regarding claim 27, see rejection above of claim 1.

Regarding claim 31, see rejection above of claim 5.

Regarding claim 32, see rejection above of claim 9.

Regarding claim 35, see rejection above of claim 6.

Regarding claim 49, see rejection above of claim 23.

Regarding claim 51, see rejection above of claim 25.

Regarding claim 52, see rejection above of claim 26.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 15-20 and 41-46 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Masui Narihiro (JP 5234079) in view of Seo (US 6,661,759).

Regarding claim 15, Masui discloses the optical information recording method

according to claim 1, wherein in the recording pulse correction step (see Figs. 1-3), the

recording pulse position is corrected amount of the recording pulse position is prescribed

according to the correction accuracy (see [0043]).

Seo, see Fig. 7, discloses recording pulse position is using a correction table in

which a correction amount of the recording pulse position is prescribed according to the

correction accuracy (see cols. 1-3).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to provide recording pulse position is using a correction table in

Masui as suggested by Seo, the motivation being in order to determine the correlativity

between the length of a mark currently being recorded and the lengths of leading/trailing

spaces (see Seo abstract).

Regarding claim 16, the combination of Masui and Seo, discloses the optical

information recording method according to claim 15, wherein in the recording pulse

correction step, a correction table is used in which the number of elements that prescribe

the correction amount of the recording pulse position is greater when the correction

accuracy is high than when the correction accuracy is low (see Seo Figs. 6-9, and cols.

14-15).

Regarding claim 17, the combination of Masui and Seo, discloses the optical

information recording method according to claim 16, wherein in the recording pulse

correction step, the number of elements in the correction table is substantially reduced

when the recording accuracy is low, by setting the correction amount that is prescribed by

a predetermined number of elements from among the plurality of elements contained in

the correction table when the correction accuracy is high to be mutually equivalent (see

Figs. 3, 6-9 and cols. 14-15).

Regarding claim 18, the combination of Masui and Seo, discloses the optical

information recording method according to claim 15, the method further comprising: a

step of generating the correction table by setting the value of the elements in accordance

with the correction accuracy from the number of table elements and the correction

resolution that are determined in advance (see Seo Table 1 and figs. 7-9 and col. 13-15).

Regarding claim 19, the combination of Masui and Seo, discloses the optical

information recording method according to claim 15, wherein in the recording pulse

correction step, one of the plurality of correction tables whose number of elements is mutually different, and which is determined in advance according to the correction accuracy, is selected and used (see Seo Table 1 and figs. 7-9 and col. 13-15).

Regarding claim 20, the combination of Masui and Seo, discloses the optical information recording method according to claim 19, wherein the plurality of correction tables that have different numbers of elements comprise: at least two selected from: (a) a correction table that prescribes uniform values that do not depend on the recording code length as the correction amount; (b) a correction table that prescribes values that depend on the recording code length as the correction amount; (c) a correction table that prescribes values that depend on a combination of the recording code length and the pre-code length and on a combination of the recording code length and the post-code length (see Seo Figs. 6-7 and cols. 1-4).

Regarding claims 41-46, see rejection above of claims 15-20, respectively.

7.   Claims 24 and 50 rejected under 35 U.S.C. 103(a) as being unpatentable over Masui Narihiro (JP 5234079) in view of Muritsugu et al. (US 5,3437,505).

Regarding claim 24, Masui discloses the optical information recording method according to claim 1, wherein a process of recording onto the optical information-recording medium is a pulse position recording process.

Moritsugu discloses a process of recording onto the optical information-recording medium is a mark position recording process (see Fig. 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a process of recording onto the optical information-recording medium is a mark position recording process in Masui as suggested by

Moritsugu, the motivation being in order to remove thermal shift and pattern shift during the recording process (see Seo col. 4, lines 33-46).

Regarding claim 50, see rejection above of claim 24.

Cited References

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to optical recording medium having an area for recording a plurality of recording/reproducing conditions to be used in recording/reproduction apparatus and recording/reproduction method and apparatus thereof; and optical information recording medium and optical information recording and reproducing apparatus.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number is 571-272-7590.   The examiner can normally be reached on Monday-Thursday from 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young be reached on 571-272-7582.   The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.   Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
VP

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER